

IN THE CLAIMS:

The claims 3, 4, 5, 6, 9, 10, 11, 13 and 14 are cancelled, and the remaining claims 1, 2, 7, 8 and 12 are amended as indicated below:

- 1 1. A method for processing a digitally encoded multimedia stream of
2 data that is in packets including processing prior to
3 transmission, multiplexing, and splicing to prevent underflow
4 of a decoder buffer of a predetermined size, each frame having
5 a presentation time stamp and a decoding time stamp, said
6 method comprising the steps of:
 - 7 a) determining, prior to transmission of a data stream, a
8 potential data underflow for said decoder buffer by a process
9 of emulation when said decoder buffer is less than said
10 predetermined size;
 - 11 b) adding a predetermined value to said presentation time
12 stamp when said potential data underflow is determined in
13 step a); and
 - 14 c) adding said predetermined value to said decoding time
15 stamp when said potential data underflow is determined in
16 step a);
- 17 whereby a buffer underflow of said decoder buffer is
18 prevented.

1 2. The method as defined in claim 1 wherein said digitally
2 encoded multimedia stream of data is an MPEG-2 transport
3 stream.

1 7. The method of claim 1 wherein said predetermined value added
2 to said presentation time stamp is an amount T determined by
3 the relationship:

4
$$T = (B - x) / [S * (P - H) / P]$$

5 where: B = the size of said decoder buffer;
6 x = the size of said current buffer;
7 S = the bit rate of said transport stream;
8 P = a uniform size of said packets; and
9 H = a minimum header size for each of said packets.

1 8. The method of claim [8] 7 wherein said current buffer level
2 is x, said packets have a uniform size P and each packet has a
3 minimum header size H, a maximum number of null packets
4 deleted is by the relationship:

5
$$N = (B - x) / (P - H)$$

6 where: N = a number of packets;
7 B = the size of said decoder buffer;
8 x = the size of said current buffer;
9 P = a uniform size of said packets; and
10 H = a minimum header size for each of said
11 packets.

1 12. In a method for transmission, multiplexing, and splicing a
2 digitally encoded transport stream to prevent buffer underflow
3 of said stream including packets each having a presentation
4 time stamp and a decoding time stamp, said method being
5 adapted for use with a decoder buffer of a predetermined size,
6 said method comprising the steps of:

7 a) determining by a process of emulation, and processing prior
8 to transmission, multiplexing and splicing said digitally
9 encoded transport stream, a potential underflow when the
10 current buffer size is less than said predetermined amount;

11 b) adding a predetermined value to said presentation time
12 stamp, when a potential underflow is determined in step (a);
13 and

14 c) adding said predetermined value to said decoding time
15 stamp, when a potential underflow is determined in step (a);

16 whereby buffer underflow is prevented.

THE AMENDED CLAIMS, AFTER THE CHANGES, APPEAR AS FOLLOWING:

1 1. (Amended) A method for processing a digitally encoded multimedia
2 stream of data that is in packets including processing prior
3 to transmission, multiplexing, and splicing to prevent
4 underflow of a decoder buffer of a predetermined size, each
5 frame having a presentation time stamp and a decoding time
6 stamp, said method comprising the steps of:

7 a) determining, prior to transmission of a data stream, a
8 potential data underflow for said decoder buffer by a process
9 of emulation when said decoder buffer is less than said
10 predetermined size;
11 b) adding a predetermined value to said presentation time
12 stamp when said potential data underflow is determined in
13 step a); and
14 c) adding said predetermined value to said decoding time
15 stamp when said potential data underflow is determined in
16 step a);
17 whereby a buffer underflow of said decoder buffer is
18 prevented.

1 2. (Not Amended) The method as defined in claim 1 wherein said
2 digitally encoded multimedia stream of data is an MPEG-2
3 transport stream.

1 7. (Not Amended) The method of claim 1 wherein said predetermined
2 value added to said presentation time stamp is an amount T
3 determined by the relationship:

4
$$T = (B - x) / [S * (P - H) / P]$$

5 where: B = the size of said decoder buffer;

6 x = the size of said current buffer;

7 S = the bit rate of said transport stream;

8 P = a uniform size of said packets; and
9 H = a minimum header size for each of said packets.

1 8. (Amended) The method of claim 7 wherein said current buffer
2 level is x, said packets have a uniform size P and each packet
3 has a minimum header size H, a maximum number of null packets
4 deleted is by the relationship:

5
$$N = (B - x) / (P - H)$$

6 where: N = a number of packets;
7 B = the size of said decoder buffer;
8 x = the size of said current buffer;
9 P = a uniform size of said packets; and
10 H = a minimum header size for each of said
11 packets.

1 12. (Amended) In a method for transmission, multiplexing, and
2 splicing a digitally encoded transport stream to prevent
3 buffer underflow of said stream including packets each having
4 a presentation time stamp and a decoding time stamp, said
5 method being adapted for use with a decoder buffer of a
6 predetermined size, said method comprising the steps of:

7 a) determining by a process of emulation, and processing prior
8 to transmission, multiplexing and splicing said digitally
9 encoded transport stream, a potential underflow when the
10 current buffer size is less than said predetermined amount;

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- 11 b) adding a predetermined value to said presentation time
12 stamp, when a potential underflow is determined in step (a);
13 and
14 c) adding said predetermined value to said decoding time
15 stamp, when a potential underflow is determined in step (a);
16 whereby buffer underflow is prevented.
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